

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims:

1-68. (Canceled)

69. (Currently amended) A method of determining whether a ~~mammal~~ human has a carcinoma or an increased likelihood of developing a carcinoma, the method comprising examining the expression of, ~~or the sequence of,~~ a Normal Epithelial Specific-1 (NES1) ~~NES1~~ gene in a biological sample obtained from the ~~mammal~~ human, a decrease in the expression of the NES1 gene ~~or a mutation in the sequence of the NES1 gene~~ indicating that the ~~mammal~~ human has a carcinoma or an increased likelihood of developing a carcinoma.

70. (Previously presented) The method of claim 69, wherein the biological sample comprises an epithelial cell.

71. (Previously presented) The method of claim 69, wherein the biological sample comprises a breast tissue cell.

72. (Previously presented) The method of claim 69, wherein the biological sample comprises a cervical tissue cell.

73. (Previously presented) The method of claim 69, wherein the biological sample comprises a prostate tissue cell.

74. (Previously presented) The method of claim 69, wherein the expression of the NES1 gene is determined by assaying NES1 mRNA expression.

75. (Currently amended) The method of claim 69, wherein the expression of the NES1 gene is determined by assaying NES1 protein expression ~~or activity~~.

76-81. (Canceled)

82. (New) The method of claim 69, wherein the biological sample comprises a cell of the skin, large intestine, lung, liver, brain, kidney, ovary, uterus, stomach, esophagus, nasopharynx, larynx, or a glandular tissue.

83. (New) The method of claim 69, wherein the decrease in the expression of the NES1 gene is a decrease relative to (a) an equivalent biological sample from an unaffected individual; (b) an unaffected biological sample of a similar tissue type from the human; or (c) a wild-type level of NES1 expression.

84. (New) A method of determining whether a human has a carcinoma or an increased likelihood of developing a carcinoma, the method comprising examining the sequence of the NES1 gene in a biological sample obtained from the human, wherein a mutation in the sequence indicates that the human has a carcinoma or an increased likelihood of developing a carcinoma.

85. (New) The method of claim 84, wherein the biological sample comprises an epithelial cell.

86. (New) The method of claim 84, wherein the biological sample comprises a breast tissue cell.

87. (New) The method of claim 84, wherein the biological sample comprises a cervical tissue cell.

88. (New) The method of claim 84, wherein the biological sample comprises a prostate tissue cell.

89. (New) The method of claim 84, wherein the mutation is detected by a mismatch detection technique.

90. (New) The method of claim 89, wherein the mismatch detection technique comprises using NES1-specific primers in a polymerase chain reaction to produce an amplified NES1 sequence.

91. (New) The method of claim 90, further comprising determining whether the amplified NES1 sequence exhibits altered hybridization, aberrant migration when electrophoresed on a gel, or altered binding or cleavage activity.

92. (New) The method of claim 84, wherein the mutation is detected by nucleic acid sequencing.

93. (New) The method of claim 84, wherein the biological sample comprises a cell of the skin, large intestine, lung, liver, brain, kidney, ovary, uterus, stomach, esophagus, nasopharynx, larynx, or a glandular tissue.

94. (New) The method of claim 84, wherein the mutation is relative to the sequence of SEQ ID NO:2.

95. (New) The method of claim 84, wherein the mutation results in a loss of NES1 expression.

96. (New) A kit for diagnosing a human for the presence of a carcinoma or an increased likelihood of developing a carcinoma, the kit comprising a wild-type human NES1 nucleic acid sequence or a fragment thereof.

97. (New) The kit of claim 96, further comprising means for detecting a mismatch between said wild-type NES1 nucleic acid sequence and a nucleic acid sequence isolated from the human.

98. (New) The kit of claim 96, further comprising means for detecting and quantitating NES1 RNA hybridization.

99. (New) The kit of claim 96, wherein the NES1 nucleic acid sequence is SEQ ID NO:2 or a fragment thereof.